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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,107

06/08/2006

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EXAMINER

BUIE, NICOLE M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,107	Applicant(s) TSUDA ET AL.	
	Examiner NICOLE M. BUIE	Art Unit 4145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20060608/ 20060831</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed on 09/12/2006 is missing. The examiner notes the cover pages and the ISR were submitted on the same day, 09/12/2006. However, the 1449 was not attached.
2. The following document, JP 06-65337, cited in the information disclosure statement filed on 08/31/2006 has been already submitted and considered as part of the information disclosure statement filed on 06/08/2006.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 1-2, 4-6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirono et al. (JP 06-065337).

Regarding claims 1, 4 and 5, Hirono et al. discloses a fluoropolymer aqueous dispersion which comprises a particle comprising a fluoropolymer dispersed in an aqueous medium in the presence of a non-ionic surfactant [0007], wherein said supernatant for assaying has a fluorine-containing anionic surfactant content of not higher than 100 ppm (Hirono et al. teaches 0 ppm fluorine-containing anionic surfactant, which meets the claimed range).

Regarding the content of nonionic surfactant, as described by ratio of (A1/A0) not lower than 0.4, said ratio measured by recited process of centrifuging and applying HPLC, while Hirono et al. does not explicitly disclose said ratio being not lower than 0.4 (it is noted that instant specification, in Table 5 provides nonionic surfactant concentration of 6 wt% as corresponding to ratio of (A1/A0) of 0.38) said concentration does not confer patentability to the claims.

As the stability of the fluoropolymer aqueous dispersion is variable that can be modified by adjusting said content of nonionic surfactant, the precise amount of nonionic surfactant would have been considered a result effective variable by one having ordinary skill in the art at the time

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the invention was made. As such, without showing unexpected results, the claimed content of nonionic surfactant cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, content of nonionic surfactant to obtain desired stability of the fluoropolymer aqueous dispersion (*In re Boesch*, 617 F .2d. 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Regarding claim 2, Hirono et al. discloses all the claim limitations as set forth above. Hirono et al. further discloses the fluoropolymer aqueous dispersion wherein the nonionic surfactant amounts to 1 to 5% by mass relative to the fluoropolymer solid matter in said fluoropolymer aqueous dispersion [0039]. While the reference does not explicitly disclose said surfactant amount being from 5 to 1% by mass relative to the fluoropolymer solid matter, it is noted that the specific amount of nonionic surfactant is not considered to confer patentability to the claims. As the stability of the fluoropolymer aqueous dispersion is variable that can be modified by adjusting said amount of nonionic surfactant, the precise amount of nonionic surfactant would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed amount of nonionic surfactant cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, amount of ionic surfactant to obtain desired stability of the fluoropolymer aqueous dispersion(*In re Boesch*, 617 F .2d. 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the

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optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Regarding claim 6, Hirono et al. discloses all the claim limitations as set forth above.

Hirono et al. further discloses the fluoropolymer aqueous dispersion wherein the fluoropolymer is a tetrafluoroethylene polymer ([0050], Ex. 4 from Table 1 [0052]).

Regarding claim 8, Hirono et al. discloses all the claim limitations as set forth above in claim 1. Hirono et al. does disclose that weatherability of a paint film is affected by the amount of fluoro-olefin which is polymerized ([0034],[0035]). However, Hirono et al. does not disclose the fluoropolymer aqueous dispersion wherein the fluoropolymer solid matter content is 20 to 80% by mass relative to said fluoropolymer aqueous dispersion.

Regarding the amount of the fluoropolymer solid matter content, since the instant specification is silent to unexpected results, the specific amount of the fluoropolymer solid matter content is not considered to confer patentability to the claims. As the weatherability of the paint film is variable that can be modified by adjusting said amount of the fluoropolymer solid matter content as taught by Hirono et al. [0034], the precise amount of the fluoropolymer solid matter content would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed amount of the fluoropolymer solid matter content cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the amount of the fluoropolymer solid matter content to obtain desired weatherability of the paint film (*In re Boesch*, 617 F.2d. 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of

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the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Regarding claim 9, Hirono et al. discloses a method of producing the fluoropolymer dispersion which comprises a pretreatment fluoropolymer aqueous dispersion containing a nonionic surfactant (A), wherein nonionic surfactant (A) has an HLB of 12 to 14 ([0007], Table 1 [0052]). However, Hirono et al. does not disclose adding a nonionic surfactant (B) to pretreatment fluoropolymer dispersion.

Regarding the addition of a nonionic surfactant (B) to pretreatment fluoropolymer dispersion in said claim, Hirono et al. discloses all the claim limitations as set forth above. Hirono et al. further discloses various nonionic surfactants, wherein nonionic surfactant (B) has an HLB of 13 to 15 which can also be used in disclosed method ([0052], Table1). Since both nonionic surfactants are taught by Hirono et al. ([0052] Table 1) to be used in the same disclosed method for the same purpose, it would have been obvious to one having ordinary skill in the art at the time of the invention to use a combination of them, see in *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980). i.e., it is well settled that is a *prima facie* obvious to combine two ingredients each of which is taught by the prior art to useful for the same purpose.

Regarding claim 10, Hirono et al. discloses all the claim limitations as set forth above. Hirono et al. further discloses the method of producing the fluoropolymer aqueous dispersion wherein an electrolyte is further added to the pretreatment fluoropolymer aqueous dispersion ([042],[0050]).

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6. Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirono et al. (JP 06-065337) as applied to claim 9 above in view of Hoshikawa et al. (JP 2003268034, see the English Equivalent US 7141620).

Regarding claim 11, modified Hirono et al. discloses all the claim limitations as set forth above. However, Hirono et al. does not disclose the method wherein the pretreatment fluoropolymer aqueous dispersion is obtained by carrying out a concentration operation at least twice.

Hoshikawa et al. teaches a process for producing an aqueous polytetrafluoroethylene (PTFE) dispersion composition (C1/L5012). Hoshikawa et al. further teaches the pretreatment fluoropolymer dispersion is obtained by carrying out a concentration operation at least twice (C4/L47-C5/L27). Additionally, Hoshikawa et al. further teaches that the nonionic surfactant should be added with water, so that the nonionic surfactant will readibly mix with the aqueous PTFE polymer emulsion (C4/L47-53) and the aqueous PTFE dispersion is allowed to sediment the PTFE particles (C5/L15-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to pretreat the fluoropolymer aqueous dispersion obtained by carrying out a concentration operation at least twice as taught by Hoshikawa et al. in the process of Hirono et al., for the purpose readibly mixing the nonionic surfactant in the dispersion.

7. Claim 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirono et al. in view of Hirono et al. (JP 06-065337) as applied to claim 9 above in view of Hoshikawa et al. (US 6498207).

Regarding claim 12, modified Hirono et al. discloses all the claim limitations as set forth above. However, modified Hirono et al. does not disclose the method of producing the fluoropolymer aqueous dispersion wherein the fluorine-containing anionic surfactant is the one to be present in carrying out a polymerization in the aqueous medium for obtaining the fluoropolymer and/or the one added after carrying out a concentration operation following the polymerization.

Hoshikawa et al. (US '207) teaches a polytetrafluoroethylene aqueous dispersion composition (Abstract, C1/L6-9). Hoshikawa et al. (US '207) further teaches that fluorine type anionic surfactants, may be added, as the case requires (C7/L21-27), such as stabilizing the fluoropolymer aqueous dispersion.

Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to incorporate the fluorine-containing anionic surfactant of Hoshikawa et al. (US '207) in the process of modified Hirono et al. Said combination would amount to use of known element for its intended use in a known environment to accomplish entirely expected results, with reasonable expectation of success.

8. Claims 1-10 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doughty, Jr. et al. (US 3,855,191) in view of Hirono et al. (JP 06-065337).

Regarding claim 1, Doughty, Jr. et al. discloses a fluoropolymer aqueous dispersion which comprises a particle comprising a fluoropolymer dispersed in an aqueous medium (Abstract, C3/L30-57), wherein a supernatant for assaying has a fluorine-containing anionic

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surfactant content of not higher than 100 ppm (C4/L22-54, C9/L17-22),, but the reference does not disclose the composition further comprising a nonionic surfactant.

Hirono et al. teaches a fluorine-containing polymer aqueous dispersion [0001]. Hirono et al. further teaches the nonionic surfactant [0007]. Additionally, Hirono et al. discloses that the nonionic emulsifier stabilizes the fluoropolymer aqueous dispersion [0038].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the nonionic surfactant of Hirono et al. in the fluoropolymer aqueous dispersion of Doughty, Jr. et al., for the purpose of stabilizing the aqueous dispersion.

Regarding the content of nonionic surfactant, as described by ratio of (A1/A0) not lower than 0.4, said ratio measured by recited process of centrifuging and applying HPLC, while Hirono et al. does not explicitly disclose said ratio being not lower than 0.4 (it is noted that instant specification, in Table 5 provides nonionic surfactant concentration of 6 wt% as corresponding to ratio of (A1/A0) of 0.38) said concentration does not confer patentability to the claims.

As the stability of the fluoropolymer aqueous dispersion is variable that can be modified by adjusting said content of nonionic surfactant, the precise amount of nonionic surfactant would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed content of nonionic surfactant cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, content of nonionic surfactant to obtain desired stability of the fluoropolymer aqueous dispersion (*In re Boesch*, 617 F .2d. 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the

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general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Regarding claim 2, modified Doughty, Jr. et al. discloses all of the claim limitations as set forth above, but does not explicitly disclose the specific amount of nonionic surfactant. Since the instant specification is silent to unexpected results, the specific amount of nonionic surfactant is not considered to confer patentability to the claims. As the stability of the aqueous dispersion and hardness are variables that can be modified by adjusting said amount of nonionic surfactant as taught by Hirono et al. ([0033]-[0038]), the precise amount of nonionic surfactant would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed amount of nonionic surfactant cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, nonionic surfactant to obtain desired stability of the aqueous dispersion and hardness (*In re Boesch*, 617 F.2d. 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Regarding claim 3, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. Doughty, Jr. et al. further discloses the fluoropolymer aqueous dispersion wherein an electrolyte is incorporated (“ammonium carbonate”, C8/L57-62). However, Doughty, Jr et al. does not disclose the specific electrolyte concentration of the said claim.

Regarding the specific amount of electrolyte of the said claim, since the instant specification is silent to unexpected results, the specific amount of electrolyte is not considered

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to confer patentability to the claims. As the stability of the aqueous dispersion is variable that can be modified by adjusting said amount of electrolyte as taught by Hirono et al.

([0042],[0048]), the precise amount of electrolyte would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed amount of electrolyte cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, amount of electrolyte to obtain desired stability of the aqueous dispersion (*In re Boesch*, 617 F .2d. 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Regarding claim 4, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. Additionally, Doughty, Jr. et al. discloses the fluoropolymer dispersion wherein the fluorine-containing anionic surfactant content in the supernatant for assaying is not higher than 50 ppm (C4/L46-54, C9/L53-C10/L11).

Regarding claim 5, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. Additionally, Doughty, Jr. et al. discloses the fluoropolymer dispersion wherein the fluorine-containing anionic surfactant content in the supernatant for assaying is not higher than 25 ppm (Figure 1).

Regarding claims 6 and 7, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. Additionally, Doughty, Jr. et al. discloses the fluoropolymer aqueous dispersion wherein the fluoropolymer is a tetrafluoroethylene polymer, which is a

perfluoropolymer (Abstract, C1/L6-8).

Regarding claim 8, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. Doughty, Jr. et al. further discloses the fluoropolymer aqueous dispersion wherein the fluoropolymer solid matter content is 20 to 80% by mass relative to said fluoropolymer aqueous dispersion (C9/L10-12).

Regarding claims 13-15, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. Doughty, Jr. et al. further discloses a fluoropolymer powder which is obtained by drying a wet powder obtained from the fluoropolymer aqueous dispersion and a fluoropolymer mold which is obtained by molding/processing the fluoropolymer aqueous dispersion (C5/L26-42).

Regarding claim 9, Doughty, Jr. et al. discloses a method of producing the fluoropolymer dispersion, wherein a supernatant for assaying has a fluorine-containing anionic surfactant content of not higher than 100 ppm (C4/L22-54, C9/L17-22)) However, Doughty, Jr. et al. does not disclose a nonionic surfactant.

Hirono et al. teaches a fluorine-containing polymer aqueous dispersion [0001]. Hirono et al. further teaches the nonionic surfactant [0007]. Additionally, Hirono et al. discloses that the nonionic emulsifier stabilizes the fluoropolymer aqueous dispersion [0038].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the nonionic surfactant of Hirono et al. in the fluoropolymer aqueous dispersion of Doughty, Jr. et al., for the purpose of stabilizing the aqueous dispersion.

Regarding the addition of a nonionic surfactant (B) to a pretreatment fluoropolymer aqueous dispersion containing a nonionic surfactant (A), Hirono et al. discloses a method of producing the fluoropolymer dispersion which comprises a pretreatment fluoropolymer aqueous dispersion containing a nonionic surfactant (A), wherein nonionic surfactant (A) has an HLB of 12 to 14 ([0007], Table 1 [0052]). Regarding the addition of a nonionic surfactant (B) to a pretreatment fluoropolymer dispersion in said claim, Hirono et al. further discloses other nonionic surfactants, wherein nonionic surfactant (B) has an HLB of 13 to 15 ([0052], Table 1) and wherein said surfactants are used in similar method for the same purpose. Since both nonionic surfactants are taught by Hirono et al. ([0052] Table 1) are disclosed as being used in a similar method for the same purpose, it would have been obvious to one having ordinary skill in the art at the time of the invention use a combination of them, see in *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980). i.e., it is well settled that it is *prima facie* obvious to combine two ingredients each of which is taught by the prior art to be useful for the same purpose.

Regarding claim 10, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. Additionally, Doughty, Jr. et al. discloses the method wherein an electrolyte is further added to the pretreatment fluoropolymer aqueous dispersion (“ammonium carbonate”, C8/L57-62).

Regarding claim 12, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. Doughty, Jr. et al. further discloses the method of producing the fluoropolymer aqueous dispersion wherein the fluorine-containing anionic surfactant is the one to be present in carrying out a polymerization in the aqueous medium for obtaining the fluoropolymer (C4/L22-54).

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doughty, Jr. et al. in view of Hirono et al. (JP 06-065337) as applied to claims 9 above, further in view of Hoshikawa et al. (JP 2003268034, see the English equivalent US 7141620).

Regarding claim 11, modified Doughty, Jr. et al. discloses all the claim limitations as set forth above. However, modified Doughty, Jr. et al. does not disclose the method of producing the fluoropolymer dispersion wherein the pretreatment fluoropolymer aqueous dispersion is obtained by carrying out a concentration operation at least twice.

Hoshikawa et al. teaches a process for producing an aqueous polytetrafluoroethylene (PTFE) dispersion composition (C1/L5012). Hoshikawa et al. further teaches the pretreatment fluoropolymer dispersion is obtained by carrying out a concentration operation at least twice (C4/L47-C5/L27). Additionally, Hoshikawa et al. further teaches that the nonionic surfactant should be added with water, so that the nonionic surfactant will readily mix with the aqueous PTFE polymer emulsion (C4/L47-53) and the aqueous PTFE dispersion is allowed to sediment the PTFE particles (C5/L15-20). Further in the step of concentrating the PTFE particles, a higher concentration of PTFE is obtained and less anionic perfluorocarboxylate surfactant is present in the PTFE-rich aqueous dispersion composition (C5/L21-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to pretreat the fluoropolymer aqueous dispersion obtained by carrying out a concentration operation at least twice as taught by Hoshikawa et al. in the process of Doughty, Jr. et al., for the purpose readily mixing the nonionic surfactant in the dispersion and having less anionic surfactant.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE M. BUIE whose telephone number is (571)270-3879. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, (EST), and Fridays, 7:30am-4pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley can be reached on (571)272-1453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. M. B./
Examiner, Art Unit 4145
3/17/2008

/Basia Ridley/
Supervisory Patent Examiner, Art Unit 4145